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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Ser. No. 09/430,063

Filed: 10/29/99

UNITARY FILTER CARTRIDGE

) Examiner: David J. Sasfai

) Art Unit: 1724

) Atty. Docket No. BHAG.68900

INFORMATION DISCLOSURE STATEMENT

Asst. Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Pursuant to the duty to disclose material information, attached is a copy of PTO Form-1449, with a copy of the references available in the parent file of Serial No. 09/273,792 filed March 22, 1999, or in U.S. Patent No. 5,885,314, issued March 23, 1999, or in U.S. Patent No. 5,632,791, issued May 27, 1997.

U.S. Registrations

2,805,731	Kron
2,957,235	Steinberg
4,073,632	Reinauer et al.
4,104,170	Nedza
4,159,197	Schuler et al.
4,184,966	Pall
4,217,117	Syverson
4,219,343	Peterson
4,220,459	Hammond et al.
4,244,718	Noddin
4,251,244	Evenstad
4,272,263	Hancock
4,276,069	Miller
4,291,904	Iverson, et al.
4,292,057	Ulvestad et al.

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2/23/00

[Signature]

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4,300,927	Day
4,310,336	Peterson
4,312,648	Day
4,350,509	Alseth et al.
4,435,197	Nijhawan et al.
4,445,915	Robinson
4,559,138	Harms, II
4,560,477	Moldow
4,575,422	Zimmer
4,813,985	Brennecke et al.
4,954,255	Muller et al.
5,057,131	Lackner et al.
5,061,303	Williams et al.
5,207,811	Buonpastore
5,207,812	Tronto et al.
5,211,846	Kott et al.
5,222,488	Forsgren
5,224,974	Johnson
5,290,446	Degen et al.
5,308,485	Griffin et al.
5,336,405	Tanf et al.
5,350,515	Stark et al.

Foreign Registrations

0498757	EPO
0160168	EPO
EP90/00452	PCT
630148	Great Britain
2407731	France

Publications

R+B Filter GmbH, Clean air is our business
 WAM Corporation, Dust Collectors
 Stanelle, Pneu-Fi
 Mahle Industriefilter, Das Mahle Industrie-Filter-Programm
 S.A.V.I.O. Officine s.r.l., Elettrofiltro Serie Plifilter
 Polipleet Filter Elements of MAC Equipment, Inc.
 MAC RTC Filter MACartridge Style
 Discovery Materials from U.S. District Court for the Western District
 of Missouri, styled BHA Group v. Midwesco; Civil Action
 No. 97-0796-CV-W-4, including deposition transcripts of
 Clements, Thill, Kauffman and Oussoren and Exhibits 1-70.

Additionally, the Examiner is informed that prior filter cartridges offered for sale by the applicants included a cartridge having a pleated filter media, an interior cylindrical support, a closed bottom end and a molded upper end.

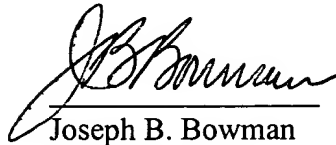
In one prior art embodiment, the upper end was molded of rigid material and had bolt holes through the flange overlying the tube sheet in order to attach the filter cartridge to the tube sheet by means of threaded bolts. The pleat pack itself was sized to extend upwardly through the tube sheet opening to register with the flange on top of the tube sheet. A sealing gasket was disposed between the bottom surface of the flange and the upper surface of the tube sheet to effect a seal of the filter cartridge against the tube sheet.

In a second prior art embodiment, the upper end was formed of two different molded components -- one such component was rigid to bond to the pleat pack and the other component was moderately flexible to engage the tube sheet. The interface or margin between the rigid and flexible components thus occurred approximately at the upper end of the pleat pack. Removal problems were encountered with this filter cartridge and numerous manufacturing difficulties were experienced.

Although both of the foregoing embodiments of filter cartridges represent prior art to the subject matter of this invention, neither embodiment disclosed the unitary construction, structural configuration or flexible feature, alone or in combination, as set forth in the claims of this application.

It is respectfully requested that the foregoing references be made of record in the above-identified application and considered by the Examiner during the prosecution thereof.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "J. Bowman", is written over a horizontal line.

Joseph B. Bowman
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